

FIG. 1
(Related Art)

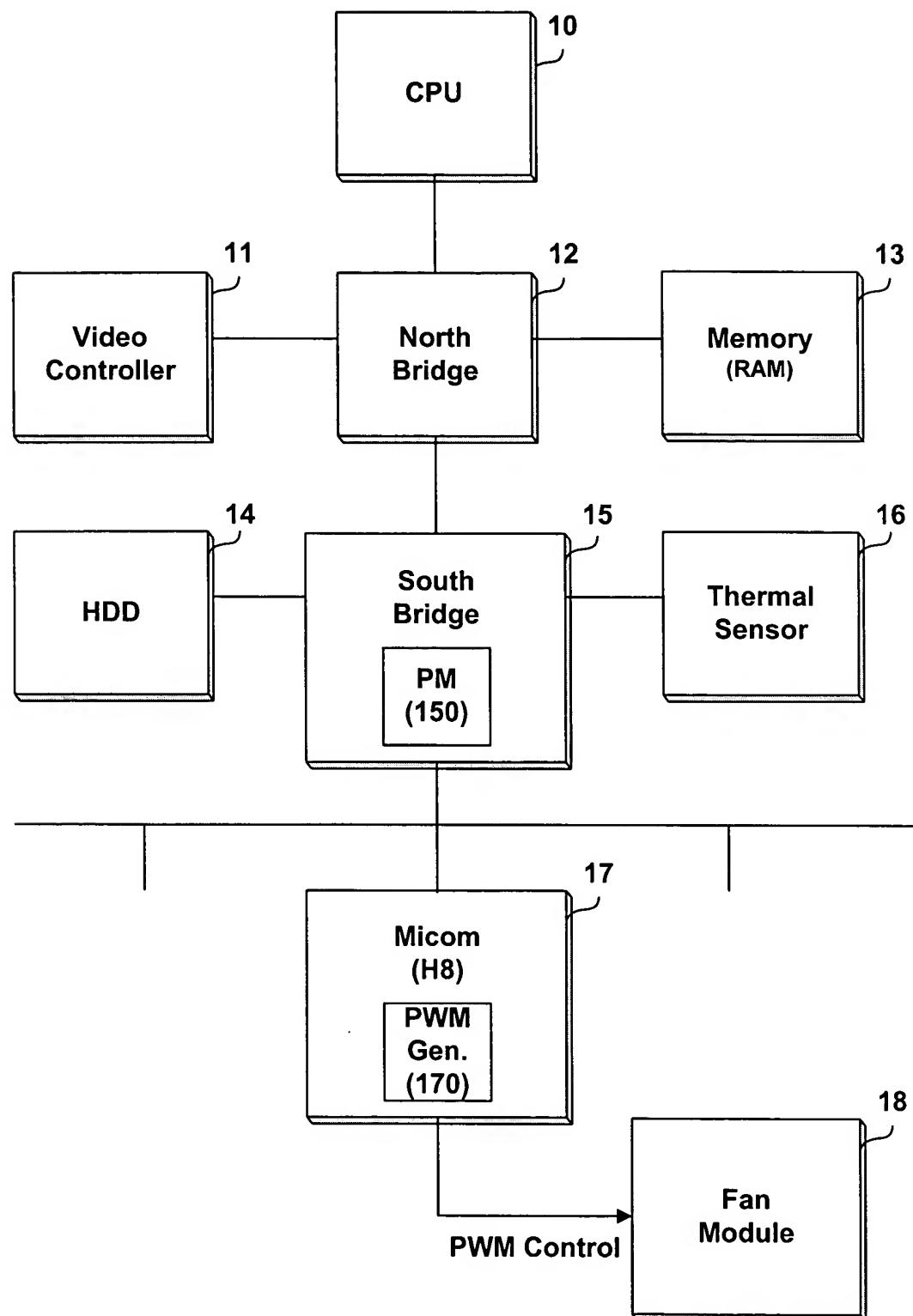


FIG. 2
(Related Art)

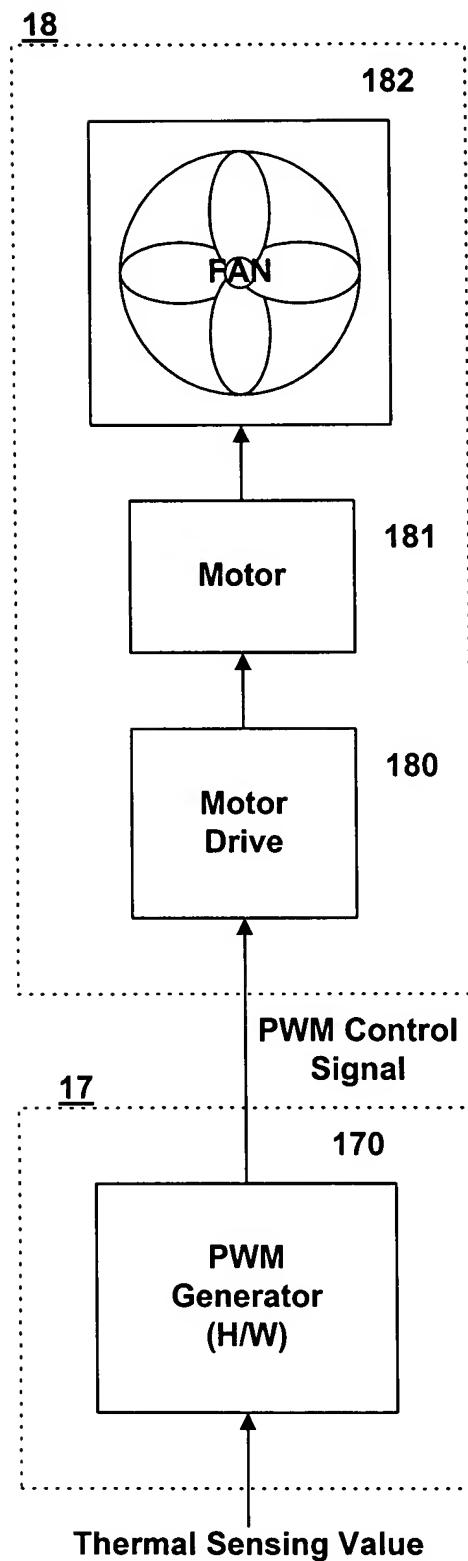


FIG. 3

(Related Art)

4bits-Resolution PWM Control Signals Generator

Steps	PWM Control Signals (PWM Patterns)	Motor Speeds (RPM)
Step 0	PWM Pattern 0	0 (min)
Step 1	PWM Pattern 1	300
Step 2	PWM Pattern 2	600
Step 3	PWM Pattern 3	900
Step 4	PWM Pattern 4	1200
⋮	⋮	⋮
Step 11	PWM Pattern 11	3300
Step 12	PWM Pattern 12	3600
Step 13	PWM Pattern 13	3900
Step 14	PWM Pattern 14	4200
Step 15	PWM Pattern 15	4500 (max)

FIG. 4

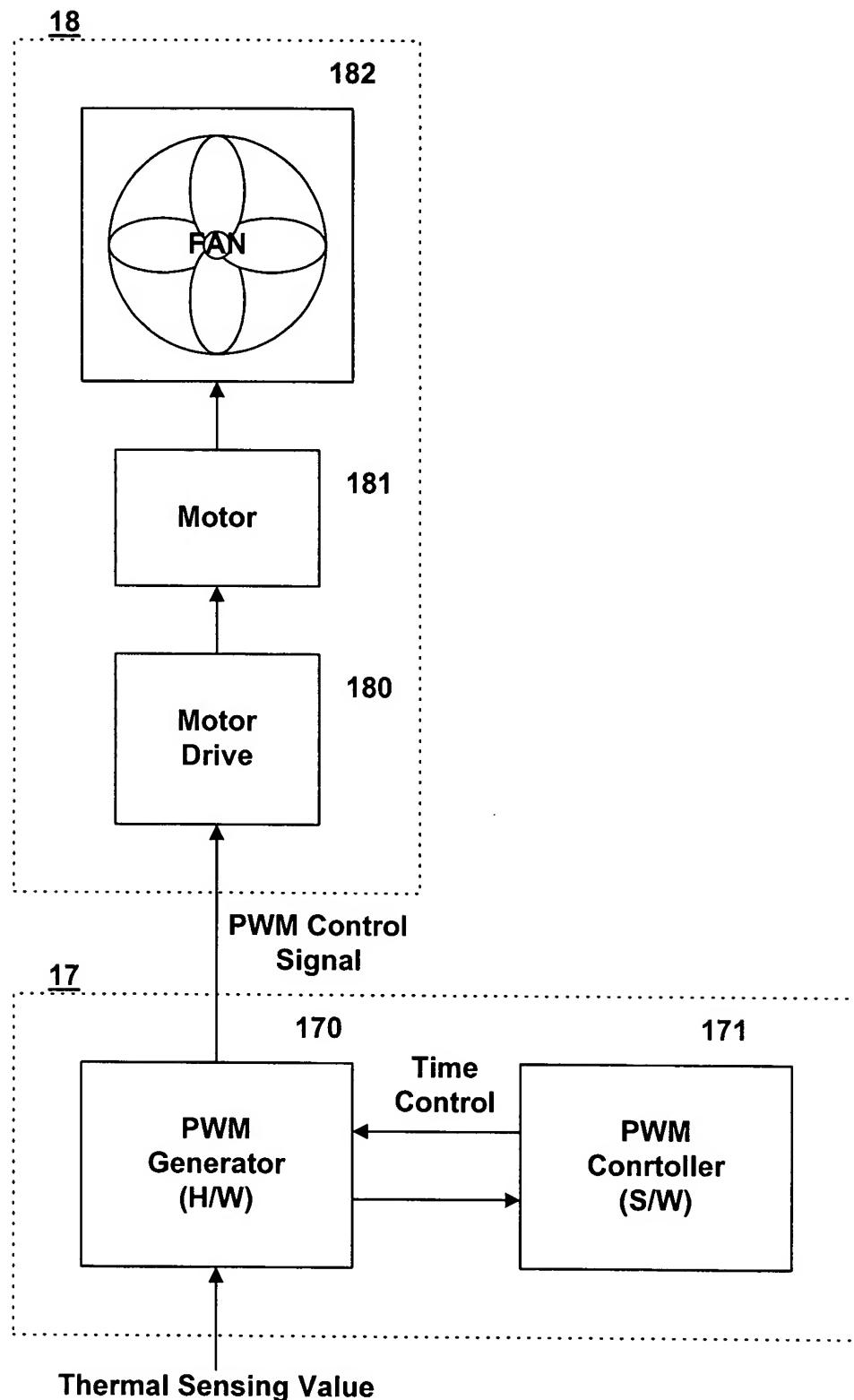


FIG. 5

Information of Steps of 8 bits-Resolution
and Motor Speeds

Steps	Motor Speeds (RPM)
Step 0	0 (min)
Step 1	18.75
Step 2	37.5
⋮	⋮
Step 176	3300
⋮	⋮
Step 187	3506.25
⋮	⋮
Step 192	3600
⋮	⋮
Step 240	4500
⋮	⋮
Step 255	4781.25 (max)

11

5

FIG. 6

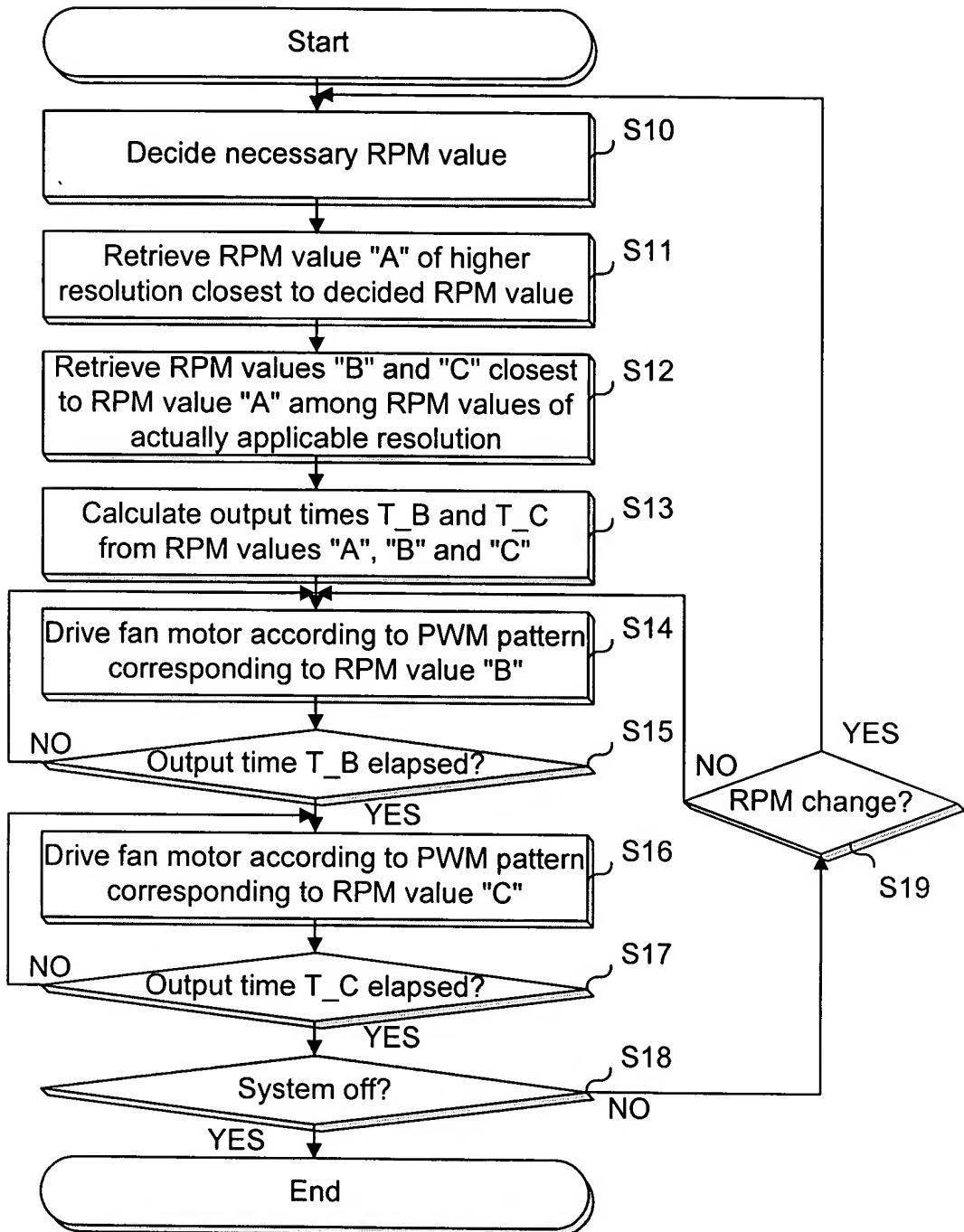


FIG. 7

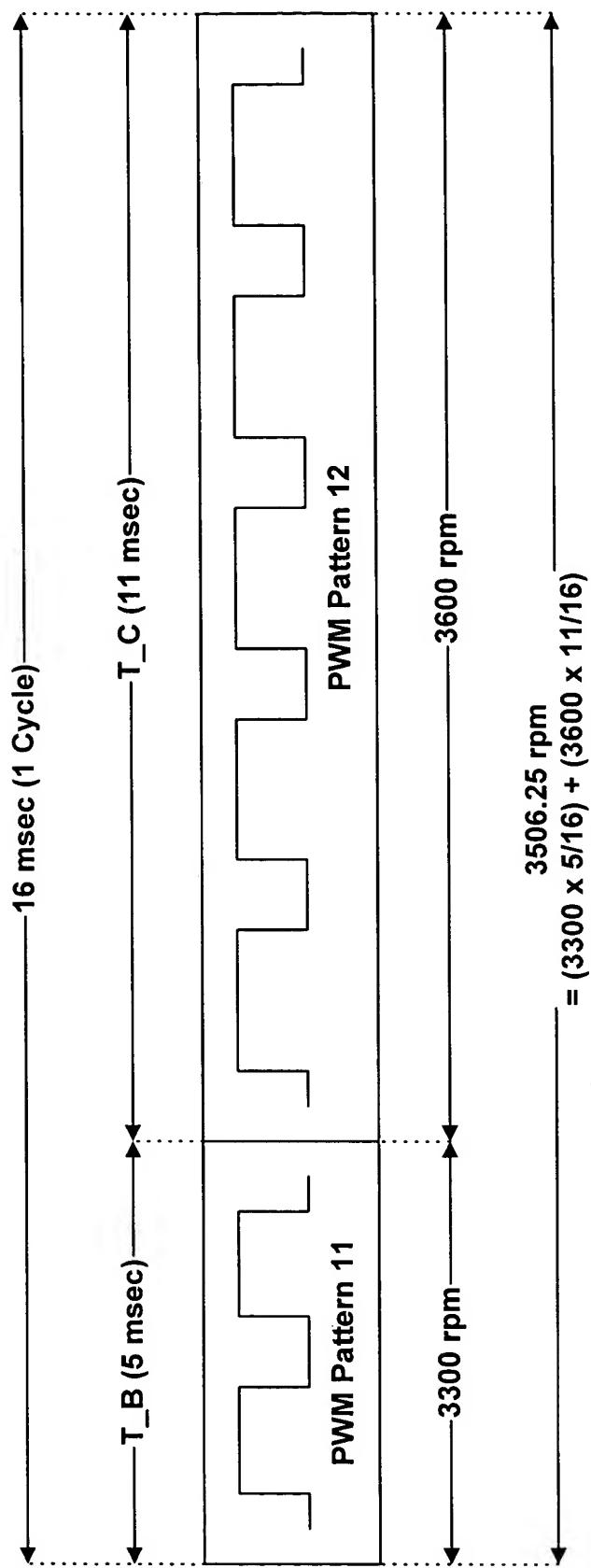


FIG. 8

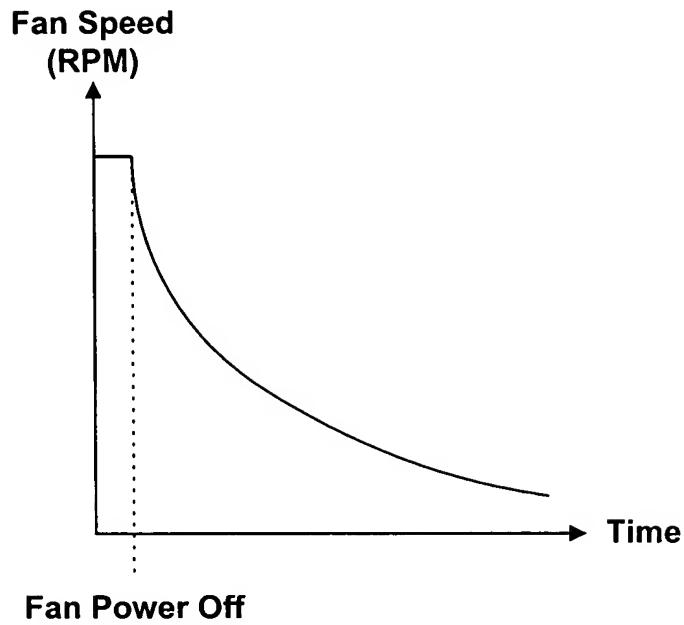


FIG. 9

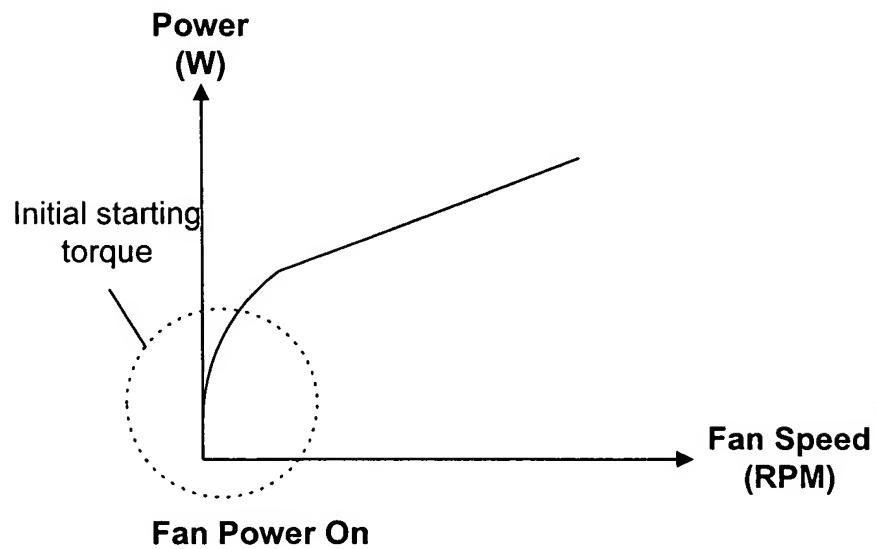


FIG. 10

